UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,398	05/15/2006	Takahiko Taniguchi	PCT06-1002	6427

7590 10/16/2007

Yokoi & Company
U S A Inc
13700 Marina Pointe Drive # 723
Marina Del Rey, CA 90292

EXAMINER	
CHENEVERT, PAUL A	

ART UNIT	PAPER NUMBER
3612	

MAIL DATE	DELIVERY MODE
10/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,398	TANIGUCHI ET AL.	
	Examiner	Art Unit	
	Paul A. Chenevert	3612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 7-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 7-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 July 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 16JUL07. These drawings are acceptable.

Response to Arguments

2. Applicant's arguments filed 16JUL07 have been fully considered but they are not persuasive.

3. The Applicants argue on page 16, line 11, that... "Berg is only fully concerned with heat transfer. Hence, it is clear that the entire thrust of the Berg reference is to prevent the heat of the floorboard of an automobile from reaching the feet of a user, and nothing more". The corrugated metal spacer members 12 of Berg may have been designed especially for heat transfer prevention, but that is not to rule out that a metallic plate placed between the occupant of a vehicle and the exterior road is not an impact absorbing body. An impact absorbing body must be able to absorb impact energy and the corrugated metal spacer members of Berg do absorb impact energy in the case of impact directed towards the corrugated metal spacer members.

4. The Applicants demand evidence on page 26, line 7, to uphold the Official Notice that energy is absorbed thereby when compressed in the thickness direction is 30 J, the generated responsive load is less than 3.0 kN, the load supporting portion having a thickness of 6-15 mm and the bridge portions having a thickness of 3-15 mm; the lower face of the bridges having a length of 20-50 mm; the angle of the groove being 5-60 degrees, the impact absorbing body having an air permeability of 2.0 $cc/cm^2/sec$ or above nor that a laminate having a permeability

greater than 0 $cc/cm^2/sec$ and smaller than 90 $cc/cm^2/sec$. The Examiner cites recent case study *in re KRS* that these claim limitations are common sense to make a better impact absorbing body.

Claim Objections

5. Claim 4 is newly objected to because on line 2, "its" was deleted instead of replaced with a more descriptive term. The claim now, after amendment, does not make sense. It is highly recommended to replace "its" with a more descriptive term and to precisely define what is a thickness direction. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-3, 7, 8, 14 & 15, and claim 4, as understood, are newly rejected under 35 U.S.C. 103(a) as being unpatentable over Abramoski et al. (US 6,224,133 B1; 01MAY01) in view of Tsuiki et al. (WO 02/059870; 01AUG02), Kiesewetter et al. (US 4,425,981 A; 17JAN84), and obvious common knowledge.

Abramoski et al. disclose an impact absorbing body (secondary floor assembly 10) disposed below feet (62) of an occupant of an automobile as interposed between a body panel (structural floor assembly 14) and a floor covering (carpeting layer 32) laid apart from the body panel toward a cabin; the impact absorbing body is made from a material obtained by foaming a synthetic resin material as described on column 3, line 1. In regards to claim 3, the body panel below the feet of the occupant has a flat-shaped flat portion (16) and a rising wall portion (18)

extended obliquely upward from a front edge of the flat portion and the impact absorbing body (26, 28) is disposed over both the flat portion and the rising wall portion.

However, Abramoski et al. do not expressly disclose a plurality of load supporting portions having V-lettered cross-sections forming grooves arranged parallel to a face facing toward the cabin of the body panel; the load supporting portions disposed side by side along the face facing toward the cabin of the body panel; a flat-plate-shaped bridge portion connecting neighboring load supporting portions; each of the load supporting portion having a thickness of 6 - 15 mm; the flat-plate-shaped bridge portion having a thickness of 3 - 15 mm; neighboring load supporting portions are connected at ends thereof on a side toward the floor covering by the flat-plate-shaped bridge portion; a generated responsive load is less than 3.0 kN when energy is absorbed in a direction of the thickness; the lower face of the bridges having a length of 20-50 mm; the angle of the groove being 5-60 degrees; the impact absorbing body having an air permeability of 2.0 $cc/cm^2/sec$ or above; nor that a laminate having a permeability greater than 0 $cc/cm^2/sec$ and smaller than 90 $cc/cm^2/sec$.

Tsuiki et al. disclose a sound absorbing body (insulator dash 20) disposed below feet of an occupant of an automobile as interposed between a body panel (dash panel 10) and a floor covering (floor carpet 30) laid apart from the body panel toward a cabin; the sound absorbing body includes a plurality of load supporting portions (surface skin layer 23) arranged side by side along a face facing toward the cabin of the body panel; the sound absorbing body is made from a material obtained by foaming a synthetic resin material as described on column 2, line 20. In regards to claim 3, the body panel below the feet of the occupant has a flat-shaped flat portion

and a rising wall portion extended obliquely upward from a front edge of the flat portion and the sound absorbing body is disposed over both the flat portion and the rising wall portion.

Abramoski et al. and Tsuiki et al. are analogous art because they are from the same field of endeavor, that is the absorption of unwanted waves of energy, whether it is the absorption of impact energy in the floor mat of Abramoski et al. or the sound absorption in the floor mat of Tsuiki et al.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact absorbing body of Abramoski et al., to employ load supporting portions, as taught by Tsuiki et al.

The suggestion/motivation for doing so would have been to allow the impact absorbing body also have sound absorbing properties, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact absorbing body of Abramoski et al. by employing load supporting portions on the impact absorbing body to obtain the invention as specified in claim 1, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

Kiesewetter et al. disclose a sound absorbing body having V-lettered cross-sections forming grooves (s) arranged parallel and neighboring grooves are connected by a flat-plate-shaped bridge portion (b). In regards to claim 2, the neighboring grooves are connected at ends thereof on a side toward the floor covering by the flat-plate-shaped bridge portion.

Abramoski et al. and Kiesewetter et al. are analogous art because they are from the same field of endeavor, that is the absorption of unwanted waves of energy, whether it is the

absorption of impact energy in the floor mat of Abramoski et al. or the sound absorption in the mat material of Kiesewetter et al.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact and sound absorbing body of Abramoski et al., as modified, to employ V-letter shaped grooves connected with flat bridges, as taught by Kiesewetter et al.

The suggestion/motivation for doing so would have been to allow the impact absorbing body also have sound absorbing properties, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact and sound absorbing body of Abramoski et al., as modified, by connecting the neighboring V-letter shaped grooves with flat bridges to obtain the invention as specified in claim 1, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

Abramoski et al., as twice modified, disclose the claimed invention except for the load supporting portion having a thickness of 6-15 mm and the bridge portions having a thickness of 3-15 mm; the impact and sound absorbing body configured such that, when energy is absorbed thereby when compressed in the thickness direction is 30 J, the generated responsive load is less than 3.0 kN; the lower face of the bridges having a length of 20-50 mm; the angle of the groove being 5-60 degrees; the impact absorbing body having an air permeability of 2.0 $cc/cm^2/sec$ or above; nor that a laminate having a permeability greater than 0 $cc/cm^2/sec$ and smaller than 90 $cc/cm^2/sec$. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ proper dimensions for the impact absorbing body, since it has

been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abramoski et al., as thrice modified, as applied to claim 1 above, and further in view of Eiji (JP 62-184947; 13AUG87; cited on IDS).

Abramoski et al., as thrice modified, disclose an impact absorbing body having V-shaped grooves and flat bridges.

However, Abramoski et al., as thrice modified, do not expressly disclose that the bridges have holes in the surfaces.

Eiji discloses an impact absorbing body having a plurality of sound-absorbing holes.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact absorbing body of Abramoski et al., as thrice modified, to employ holes in the top surface, as taught by Eiji.

The suggestion/motivation for doing so would have been to improve the sound absorbing property of the impact absorbing body, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact absorbing body of Abramoski et al., as thrice modified, by combining holes with the bridges to obtain the invention as specified in claim 9, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

9. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abramoski et al., as thrice modified, as applied to claim 1 above, and further in view of Tokoro et al. (US 2002/0182399 A1; 05DEC02)

Abramoski et al., as thrice modified, disclose impact absorbing body.

However, Abramoski et al., as thrice modified, do not expressly disclose that the impact absorbing body employs molded aggregate of cylindrical resin granules having various properties.

Tokoro et al. discloses employing a molded body of thermoplastic resin having sound absorption characteristics. In particular, one embodiment employs slanted granules having elliptical openings and another embodiment employs roughened interior surfaces.

Abramoski et al., as thrice modified, and Tokoro et al. are analogous art because they are from the same field of endeavor, which is the absorption of unwanted sound.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact absorbing body of Abramoski et al., as thrice modified, to employ cylindrical sound absorbing aggregate, as taught by Tokoro et al.

The suggestion/motivation for doing so would have been to improve the sound absorption property of the impact absorbing body, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact absorbing body of Abramoski et al., as thrice modified, by combining cylindrical aggregate with the V-shaped corrugated layer to obtain the invention as specified in claim 10, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abramoski et al., as modified four times, as applied to claim10 above, and further in view of Kramer (US 2,709,105 A; 24MAY55).

Abramoski et al., as modified four times, disclose an impact absorbing body.

However, Abramoski et al., as modified four times, do not expressly disclose that the face of the impact absorbing body facing toward the outside of the automobile is roughened.

Kramer discloses an impact absorbing body (mat 21) having a face (ribs 24) facing toward the outside of the automobile is roughened.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact absorbing body of Abramoski et al., as modified four times, to employ a roughened outer face, as taught by Kramer.

The suggestion/motivation for doing so would have been to allow for even more impact, heat, and sound protection, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact absorbing body of Abramoski et al., as modified four times, by combining a roughened outer face with the impact absorbing body to obtain the invention as specified in claim 16, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

11. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abramoski et al., as modified four times, as applied to claim10 above, and further in view of Kramer and Stata (US 3,387,315 A; 11JUN68).

Abramoski et al., as modified four times, disclose an impact absorbing body.

However, Abramoski et al., as modified four times, do not expressly disclose that the face of the impact absorbing body facing toward the outside of the automobile has concavities and convexities further laminated with felt.

Kramer discloses an impact absorbing body (mat 21) having a face (ribs 24) facing toward the outside of the automobile having concavities and convexities.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact absorbing body of Abramoski et al., as modified four times, to employ an outer face having concavities and convexities, as taught by Kramer.

The suggestion/motivation for doing so would have been to allow for even more impact, heat, and sound protection, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact absorbing body of Abramoski et al., as modified four times, by combining an outer face with concavities and convexities on the impact absorbing body to obtain the invention as specified in claim 17, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

Stata discloses a impact absorbing body having a laminated felt layer (11).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the impact absorbing body of Abramoski et al., as modified five times, to employ felt, as taught by Stata.

The suggestion/motivation for doing so would have been to provide even further impact, heat, and sound absorption properties, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a prima facie obvious modification of the impact absorbing body of Abramoski et al., as modified five times, by combining felt with the outer surface to obtain the invention as specified in claim 17, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Chenevert whose telephone number is 571-272-6657. The examiner can normally be reached on Mon-Fri (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn D. Dayoan can be reached on 571-272-6659. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul A. Chenevert
Examiner
Art Unit 3612

PAC
09OCT07

PAC

D. GLENN DAYOAN
SUPERVISORY PATENT EXAMINER 10/15/07
TECHNOLOGY CENTER 3600

10/579,398

Approved
PAC 08OCT07

FIG. 19
PRIOR ART